EMARKS / ARGUMENTS

Reconsideration and allowance of this application are respectfully requested in the light of the foregoing amendments and the following remarks.

Claims 1, 3 - 6, and 8 - 22 are pending in the application. The subject matter of claims 1, 2 and 7 has been combined in amended claim 1. Accordingly, claims 2 and 7 have been cancelled. Claims 3 - 5, 8 and 9 have been amended.

New Claims 23 through 26 have been added to complete the record for examination and highlight advantageous embodiments of the invention.

Claim 23 is directed to advantageous embodiments in which the film comprises a hydrolysis stabilizer composition consisting essentially of at least one phenolic compound and at least one of either monomeric carbodiimides, polymeric carbodiimides or oxazolines. Support for Claim 23 can be found in the application as filed, for example on Page 5, line 6 – Page 6, line 4 and lines 10 – 11.

Claim 24 is directed to further aspects of such embodiments, in which the hydrolysis stabilizer is supplied as a precrystallized and/or predried masterbatch. Support for Claim 24 can be found in the application as filed, for example on Page 19, lines 3 – 4 and Page 20, lines 3 - 7.

Claim 25 is directed to additional aspects of such embodiments, in which the film contains up to 35% recycle formed from the claimed films. Support for Claim 25 can be found in the application as filed, for example on Page 20, lines 11 – 12 and Page 26, lines 1 - 5.

Claim 26 is directed to advantageous embodiments of the invention in which the hydrolysis stabilizer composition consists essentially of at least one phenolic compound, at least one organic phosphate and at least one of either monomeric carbodiimides, polymeric carbodiimides or oxazolines. Support for Claim 23 can be found in the application as filed, for example on Page 5, line 6 – Page 6, line 4 and lines 10 - 11.

Applicants note with gratitude that the Examiner has acknowledged that claim 10 is directed to allowable subject matter.

Rejection of claims 3 and 8 under 35 U.S.C. § 112

Claim 8 has been rejected under 35 U.S.C. § 112, first paragraph. In an effort to overcome the rejection, it has been clarified that the molecular weight of the polymeric carbodiimide is given in Dalton, as is customary in the pertinent art. Dalton has the same meaning as g/mol, as can be seen e.g. from Hackh´s Chemical Dictionary. A person skilled in the art could not have imagined any meaning other than that when dealing with the molecular weight of a compound.

The Examiner is respectfully requested to reconsider and withdraw the rejections based on § 112.

Rejection of claims 1 - 4, 7 - 9, 11 - 13, 16 and 20 under 35 U.S.C. § 102(b) or (e)

Claims 1 - 4, 7 - 9, 11 - 13, 16 and 20 stand rejected as being allegedly anticipated by Sommer et al., US 5,457,018 ("Sommer"), Mortlock et al. US 5,562,984 ("Mortlock"), Hunter et al. US 5,763,538 ("Hunter"), Carlson et al. US 5,867,316 ("Carlson") or Tojo et al US 6,503,599 ("Tojo ").

This rejection is respectfully traversed. Sommer discloses a biaxially stretched polyester film, as correctly set forth in the Official Action. The polyester film has "an improved covering power" (col. 1, l. 45) and can be used as a replacement for PE paper (col. 6, l. 4). Consequently, the film is not at all transparent. Sommer employs the film as a support material in a photographic material, which comprises at least one photographic emulsion layer and, optionally, interlayers and protective layers (col. 6, l. 9 - 19). It is the photographic emulsion layer which may contain UV-stabilizers (col. 10, l 60 - 65) or hindered phenols (col. 11, l. 37 - 46). There is no disclosure that these additives could be incorporated in the polyester support material. Sommer further does not note the recited use of carbodiimides or oxazolines. The reference hence cannot anticipate a transparent film as presently claimed. Nor does the reference anticipate the claimed carbodiimides or oxazolines.

Mortlock teaches a polyester film comprising an antioxidant, the film being useful as an electrical insulator, e.g. in electric motors or electric capacitators (col. 1, l. 3 - 8). As the antioxidant, sterically hindered phenols may be employed (col. 2, l. 36 - 49). Mortlock similarly does not note the use of carbodiimides or oxazolines. The film is optionally biaxially stretched. It is generally translucent or opaque (col. 3, l. 27 - 38), but not transparent within the meaning of the present application. This is preferably achieved by incorporating an opacifying particulate inorganic filler of the voiding or the non-voiding type. Accordingly, Mortlock cannot anticipate the presently claimed transparent film. Nor does the reference anticipate the claimed carbodiimides or oxazolines.

Hunter discloses oriented polyester articles having an improved hydrolytic stability. The articles are monofilaments, fibers, films, molded parts or containers (col. 1, l. 6 - 13). The improved hydrolytic stability is due to the presence of a polyalkylene glycol or an alkoxy end-capped polyalkylene glycol (col. 2, l. 32 - 34). The list of

hydrolysis stabilizers as set forth in present amended claim 1 does not embrace such compounds. Optionally, the oriented polyester article of Hunter may contain carbodiimides (col. 1, l. 64/65). However, Hunter does not teach or suggest the use of oxazolines or hindered phenols. Hunter does not anticipate a transparent film as presently claimed. Nor does the reference anticipate the claimed oxazolines or optional hindered phenol.

Carlson discloses a diffusely reflective film comprising a continuous matrix and inclusions dispersed therein (col. 4, l. 64 - 67). For example, films made from a blend of 75 percent by weight of polyethylene naphthalate (PEN) as the continuous phase and 25 percent by weight of polystyrene as dispersed phase are disclosed. The optical properties of the film are asymmetric, i.e. in one direction it is highly reflective whereas in a direction perpendicular thereto it is much less reflective. The film as taught by Carlson is not a transparent film within the meaning as set forth in the present specification. Contrary thereto, the presently claimed film is highly transparent, which means it has a high light transmittance of over 80 % in any direction (present specification, paragr. 27). Furthermore, Carlson does not teach or suggest carbodiimides or oxazolines as hydrolysis stabilizers, although providing a laundry list of suitable antioxidants. The reference hence does not anticipate the presently claimed film.

Tojo focusses on biaxially oriented polyester films for magnetic recording media, e.g. for video tapes. The polyester material may contain film formation modifiers, thermal stabilizers, antioxidants and other additives as required. As an example of an antioxidant, hindered phenol-based compounds are mentioned (col. 3, l. 1/2). There is no further disclosure about the hindered phenol-based compounds are. They are not employed in the Examples. Carbodiimides or oxazolines are not contemplated at all. Consequently, the reference does not anticipate the film as presently claimed.

Rejection of claims 1 - 9 and 11 - 22 under 35 U.S.C. § 103(a)

Claims 21 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over DeNicola, Jr. et al., US 6,218,023 ("DeNicola") in view of Murschall et al., US 5,302,427 ("Murschall"), Peiffer et al., US 5,468,527 ("Peiffer"), Dries et al., US 5,529,843 ("Dries") or Schuhmann et al., US 5,554,245 ("Schuhmann").

The Office Action asserted that it would have been obvious to add the additive master batch of DeNicola in the process of the secondary references in order to assure an improved dispersion of the additives.

DeNicola teaches a process for the production of a polyester film, in which a UV stabilizer is added as a master batch (col. 15, l. 10 - 40). The UV stabilizer is different in its chemical structure from the hydrolysis stabilizers set forth in the present claims. What is more, DeNicola is completely silent about using any hydrolysis stabilizers. DeNicola further does not teach or suggest the recited precrystallized and/or predried masterbatches of Claims 21, 22 and new Claim 24.

Murschall teaches a process for the production of a transparent olefin multilayer film, which comprises co-extruding the individual layers through a sheet die so as to form a multilayer film, cooling the film, biaxially stretching it and finally heat-setting it. The multilayer film comprises at least one outer heat-sealable layer which in turn contains a polydiorganosiloxane. The latter is added in the form of a masterbatch. Hydrolysis stabilizers are not contemplated by Murschall. Murschall further does not teach or suggest the recited precrystallized and/or predried masterbatches of Claims 21, 22 and new Claim 24.

Combining the teaching of DeNicola with that of Murschall hence cannot render obvious a film as presently recited in Claims 21, 22 and new Claim 24.

Peiffer discloses a transparent, oriented polyolefin film comprising a base layer of polypropylene and a not heat-sealable outer layer. It is produced by coextruding the melts corresponding to the individual layers, followed by biaxial stretching (see col. 6). There is no disclosure about using masterbatches in the production of the films, and certainly not the recited precrystallized and/or predried masterbatches of Claims 21, 22 and new Claim 24.

Dries and Schuhmann teach a composite film comprising a polypropylene base layer and a heat-sealable polyolefinic top layer. It is obtained by co-extruding the individual layers through a slot die, stretching the thus generated multilayer film in longitudinal and transverse direction and, preferably, heat-setting the biaxially oriented film. Masterbatches are not disclosed, and particularly not the recited precrystallized and/or predried masterbatches of Claims 21, 22 and new Claim 24.

Applicants respectfully submit that there would have been no motivation to have combined these references, which are taken from altogether different fields of endeavor. More particularly, the primary reference deals with polyester films, whereas all of the secondary references focus on polyolefin-based films. However, even if combined, it is not apparent how a combination of the primary reference, DeNicola, with Murschall, Peiffer, Dries or Schuhmann should have rendered obvious a process as claimed in claim 21, ~~or~~ 22 or new Claim 24, each reciting the presence of precrystallized and/or predried masterbatches.

Claims 1 - 9 and 11 - 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sommer et al., US 5,457,018 ("Sommer"), Mortlock et al., US 5,562,984

("Mortlock"), Hunter et al., US 5,763,538 ("Hunter"), Carlson et al., US 5,867,316 ("Carlson"), or Tojo et al., US 6,503,599 ("Tojo") in view of Rashbrook, US 4,203,888 ("Rashbrook"), Murakami et al., US 4,264,667 ("Murakami"), Matsumura et al., US 4,517,315 ("Matsumura"), Brozek et al., US 5,138,024 ("Brozek"), Suzuki et al., US 5,262,460 ("Suzuki"), Anderson, II, US 5,324,467 ("Anderson"), Bland et al., US 5,427,842 ("Bland"), Rogers et al., 5,804,626 ("Rogers"), Wakabayashi et al., US 6,355,336 ("Wakabayashi"), Hebrink et al., US 6,569,515 ("Hebrink"), Johnson et al., US 6,613,819 ("Johnson"), or Nisshinbo Industries, Inc., EP 0 803 538 ("Nisshinbo").

The rejection is respectfully traversed. As already set forth above, the polyester film as taught by Sommer has a high covering power and consequently is not in any way transparent. Sommer further does not teach or suggest the recited carbodiimides or oxazolines

The polyester films as taught by Mortlock and Carlson are also not transparent. Tojo provides nothing more than a rather general statement saying that antioxidants, such as hindered phenol-based compounds, may be used. Neither Mortlock, Carlson or Tojo teach or suggest films incorporating carbodiimides or oxazolines. Hunter employs polyalkylene glycol as essential hydrolysis stabilizer, which is outside the scope of present amended claim 1. Hunter does also not teach or suggest the recited oxazolines or optional hindered phenol.

The twelve secondary references do not cure the deficiencies of the above five primary references.

Rashbrook teaches an oriented polyester film comprising organic diphosphates as flame retardants. Incorporating these flame retardants in a polyester film as disclosed in any of the primary references would not have resulted in a transparent film as claimed in

present amended claim 1 or in present claims 16 or 17. Nor would it have resulted in the claimed hydrolysis stabilizer.

The transparent polyester film of Murakami contains a sulfonic acid metal salt and/or a phosphoric acid metal salt as antistatic agent. Following extrusion, the film is drawn at least uniaxially and then heat-treated (col. 1, l. 7 - 9; col. 2, l. 30 - 50). Murakami teaches UV absorbers, antioxidants and fire retardants as optional ingredients (col. 7, l. 8 - 11), but does not contemplate or even suggest hydrolysis stabilizers. The combination of Murakami et al. with any of the primary references therefore does not render obvious the subject matter of the present claims.

Matusumura teaches a process for a film-like structure of an aromatic polyester. During the process, low-molecular-weight compounds are virtually completely extracted from the stretched film-like structure with an organic solvent (see Abstract). This would clearly lead away from using low-molecular weight hydrolysis stabilizers, such as the recited monomeric carbodiimides.

Brozek et al. teaches a film produced from specific copolyesters, which may further contain an organic phosphite or phosphate stabilizer (col. 7, l. 41 et seq.). In addition to the organic phosphite or phosphate, an antioxidant may be employed, the antioxidant preferably being a hindered phenol compound such as „®Irganox 1010" (col. 9, l. 61 - 67). Even if, arguably, the phosphites and hindered phenols were used in a film as suggested in any of the primary references, this would not result in a film as presently claimed.

Suzuki was cited in the Office Action with respect to phosphite antioxidants and flame retardants, which may be incorporated in a polyester article. Even if a person of ordinary skill in the pertinent art had added these ingredients to a polyester film this would not have resulted in a film as claimed in present amended claim 1. It should be noted that

the reference is silent about carbodiimides and oxazolines.

Anderson discloses a multilayer laminate film comprising a polypropylene layer adhered to a copolyester layer (col. 2, l. 44 - 48). The polypropylene layer may contain additives such as radiation stabilizers, flame retardants and the like (col. 3, l. 1 - 5). This disclosure does not provide motivation to employ hydrolysis stabilizers in a polyester film.

Bland discloses a tear-resistant film comprising more than five layers. The layers are made from a stiff polyester or copolyester and a ductile polymeric material (col. 3, l. 34 - 39). Optionally, intermediate layers may be arranged between the layers. Each of the layers may contain conventional adjuvants, additives, colorants, extenders, antioxidants, thermal stabilizers, UV-stabilizers, plasticizers and the like. Hydrolysis stabilizers are not contemplated. The combination of Bland et al. with any of the primary references hence cannot render obvious the polyester film as presently claimed.

Rogers et al. teach polyester fibers and films based on naphthalenedicarboxylic acid, especially, naphthalene-2,6-dicarboxylic acid, and ethylene glycol. As a stabilizer, the fibers and films further contain a polymeric carbodiimide. Films based on naphthalene-dicarboxylic acid and ethylene glycol (PEN) are not within the scope of present amend claim 1. The proffered combination of Rogers et al. with any of the primary references hence fails to teach the film as claimed in present amended claim 1.

Wakabayashi et al. discloses a multilayer packaging film comprising a core layer of a polytetramethyleneterephthalate resin and, on both surfaces of the core layer, a layer based on a polyolefin resin. To the core layer other substances may be added, for example, an antioxidant such as a phosphite or hindered phenol and a heat stabilizer. The presently claimed film does not comprise any polyolefin layers. A person skilled in the art would therefore not have found any motivation to combine Wakabayashi et al. with any of

the primary references.

Hebrink teaches a multilayered polymer film comprising first and second optical layers and non-optical layers. All of these layers are based on polyester. In addition thereto, various functional layers or coating may be added (col. 8, l. 23 - 33). Such functional layers or coatings may contain flame retardants, UV-stabilizers or the like. No further details are provided about the composition of the functional layers or coatings, and Hebrink is silent as to hydrolysis stabilizers. Hebrink hence would not have motivated a person skilled in the art to incorporate the recited hydrolysis stabilizer in a polyester film layer.

Johnson discloses a monolayered or multilayered polyester film which is rendered light stable by a UV absorbing compound and a hindered amine light stabilizer (HALS) incorporated into the film. Carbodiimides or similar hydrolysis stabilizers are not taught in the reference. Combining the teaching of Johnson with any of the primary references hence could not have suggested a polyester film as claimed in present amended claim 1.

Nisshinbo teaches carbodiimides as hydrolysis stabilizers for an ester group containing resin, especially a polyesterurethane. According to the reference, the resin may be processed into a film having a relatively high thickness of about 500 μm (see e.g. Examples 3 and 4). The reference does not teach the use of polymeric carbodiimides in biaxially stretched and heat-set films which have a much lower thickness. A person skilled in the art would not have contemplated using a polymeric carbodiimide in such a biaxially stretched and heat-set film since he would have expected that even such polymeric carbodiimides show a significant volatility under the conditions employed during stretching and heat-setting. A combination of Nisshinbo Industries, Inc. with any of the primary references hence would not have resulted in a film as claimed in present claim 1.

Applicants respectfully submit that there would have been no motivation to have combined these references. Applicants respectfully submit that merely because the references can be combined is not enough, there must still be a suggestion. MPEP 2143.01 (section citing Mills). Applicants further respectfully submit that the Office Action is indulging in an impermissible hindsight analysis by merely picking and choosing elements from the numerous pieces of prior art while using the instant specification as the guide for that selection process.

However, even if such a strategy were pursued (which Applicants submit should not be done), the claimed invention would not have resulted. More particularly, the combination would not result in film comprising at least one hydrolysis stabilizer selected from the group consisting of monomeric and polymeric carbodiimides and oxazolines, and wherein the film optionally comprises as a further hydrolysis stabilizer a phenolic compound.

And the combination most certainly would not have produced the advantageous hydrolysis stabilizer composition of Claims 23 through 25, reciting a hydrolysis stabilizer composition consisting essentially of (i) at least one phenolic compound to retard the hydrolysis of ester bonds, and (ii) at least one compound selected from either monomeric carbodiimides, polymeric carbodiimides or oxazoline to restore bonds previously broken by hydrolysis. Nor would the combination teach or suggest such hydrolysis stabilizer compositions further including at least one organic phosphate to degrade peroxides, as recited in Claim 26.

The combined references also do not teach or suggest hydrolysis stabilizer supplied as a precrystallized and/or predried masterbatch, as recited in Claim 24. Nor does the combination teach or suggest that films containing such a hydrolysis stabilizer composition can be recycled in amounts of up to 35%, as recited in Claim 25.

Accordingly, Applicants respectfully submit that all of pending Claims 1, 3 - 6, and 8 - 22 and new Claims 23 through 26 are patentable in light of the art of record, considered either alone or in combination.

Conclusion

It is respectfully submitted that Applicants have made a significant and important contribution to the art, which is neither disclosed nor suggested in the art. In view of the above, each of the presently pending claims in this application is believed to be in condition for allowance. Accordingly, the Examiner is respectfully requested reconsider the case and to pass this application to issue. It is requested that the Examiner telephone the undersigned if any questions remain to expedite examination of this application.

It is not believed that fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional fees are necessary to allow consideration of this paper, the fees are hereby authorized to be charged to Deposit Account No. 50-2193.

Respectfully submitted,

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I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office to (703) 872-9306 on February 6, 2004.

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